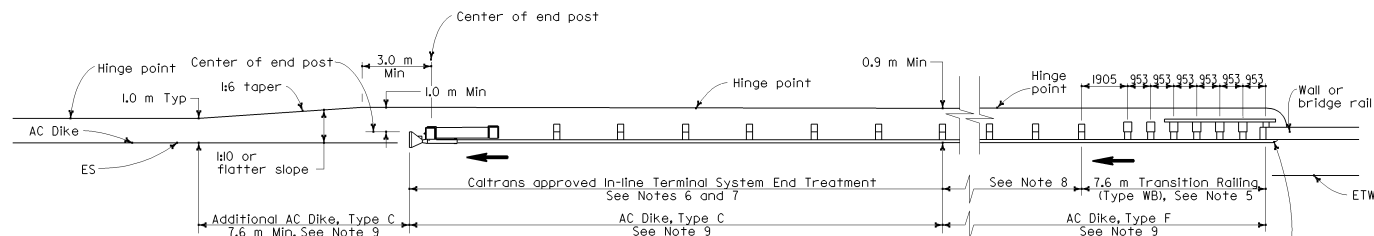


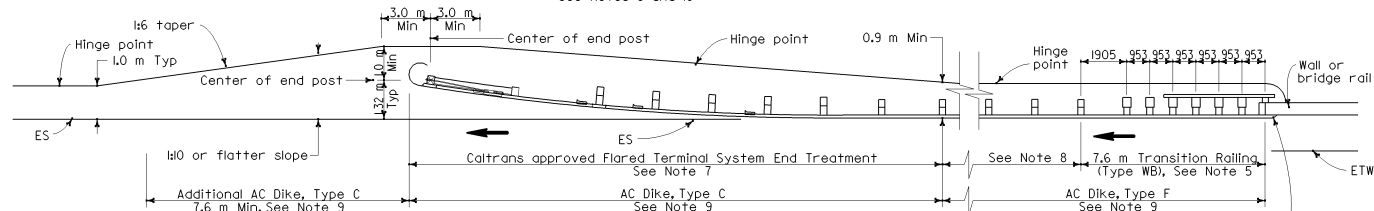


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET TOTAL NO. SHEETS
Ellis K. Hirst REGISTERED CIVIL ENGINEER July 1, 2004 PLANS APPROVAL DATE The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet. To get to the Caltrans web site, go to: <a href="http://www.dot.ca.gov">http://www.dot.ca.gov</a>				
Ellis K. Hirst No. C17926 Exp. 6-30-05 CIVIL STATE OF CALIFORNIA				



### TYPE 12AA LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH AN IN-LINE END TREATMENT AT TRAILING END OF RAILING)  
See Notes 9 and 10



### TYPE 12BB LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH A FLARED END TREATMENT AT TRAILING END OF RAILING)  
See Notes 9 and 10

## NOTES

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 1905 mm center to center, except as otherwise noted.
- Except as noted, line posts are 150 mm x 200 mm x 1.83 m wood with 150 mm x 200 mm x 360 mm wood blocks, MW 150 x 14 steel posts, 1.83 m in length, with 150 mm x 200 mm x 360 mm notched wood blocks or plastic blocks may be used for 150 mm x 200 mm x 1.83 wood posts with 150 mm x 200 mm x 360 mm wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by ➡.
- For Transition Railing (Type WB) details for Types 12AA and 12BB Layouts, see Standard Plan A77J4.
- In-line Terminal System Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 3.8 m with 1.9 m post spacing) between the transition railing and end treatments.
- Where placement of dike is required with guard railing installations, see Standard Plan A77C4 for dike positioning details.
- Type 12AA or Type 12BB Layouts are typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 12 meters. See Railing Case 2 in Diagram No. 1 on Standard Plan A77D1.
- For additional details of typical connections to bridge rail, see Connection Detail BB on Standard Plans A77J1, Connection Detail CC on Standard Plan A77J2, Connection Detail GG on Standard Plans A77K1 and Connection Detail HH on Standard Plans A77K2.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR STRUCTURE DEPARTURE

NO SCALE  
ALL DIMENSIONS ARE IN  
MILLIMETERS UNLESS OTHERWISE SHOWN

**A77F4**